

REMARKS

In the Office Action,¹ the Examiner took the following actions:

- (a) objected to claims 6, 8, 16, and 18;
- (b) rejected claims 12-18 under 35 U.S.C. § 101; and
- (c) rejected claims 1-19 under 35 U.S.C. § 103(a) as being unpatentable over Kanade et al. (U.S. Patent Application Publication No. 2005/0135680, "Kanade") in view of Leger (U.S. Patent No. 5,978,504, "Leger");²
- (d) rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Kanade in view of Leger and further in view of Mitaka et al. (U.S. Patent No. 5,546,476, "Mitaka"); and
- (e) rejected claims 20 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Kanade in view of Leger and further in view of Lewis (U.S. Patent Application Publication No. 2004/0138780, "Lewis").

By the present amendment, Applicant has amended claims 1, 6, 8, 12, and 16-19. Support for the amendments can be found in the specification at, for example, page 37, line 12- page 39, line 1, and page 63, lines 1-10. Claims 1-21 remain pending in this application.

Objection to claim 6, 8, 16, and 18 under 35 U.S.C. 112

Applicant respectfully traverses the objection to claims 6, 8, 16, and 18. However, to advance prosecution, Applicant has amended claims 6, 8, 16, and 18 to improve form, and respectfully requests the Examiner to withdraw the objection.

¹ The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

² The Office Action provides no reason to reject claim 5.

Rejection of claims 12-15 under 35 U.S.C. 101

Applicant respectfully traverses the rejection of claims 12-18 under 35 U.S.C. § 101. However, Applicant has amended claims 12 and 17 to even more clearly comply with 35 U.S.C. § 101. Therefore, Applicant respectfully requests the Examiner to withdraw the rejection of claims 12-18 under 35 U.S.C. § 101.

Rejection of claims 1-19 under 35 U.S.C. § 103(a)

Applicant respectfully traverses the rejection of claims 1-19 under 35 U.S.C. § 103(a) as being unpatentable over Kanade in view of Leger.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. M.P.E.P. § 2142, 8th Ed., 7 (July 2008). “A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention.” M.P.E.P. § 2145. Furthermore, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art” at the time the invention was made. M.P.E.P. § 2143.01(III), internal citation omitted. Moreover, “[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences *themselves* would have been obvious, but whether the claimed invention *as a whole* would have been obvious.” M.P.E.P. § 2141.02(I), internal citations omitted (emphasis in original).

“[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966).

... The factual inquiries...[include determining the scope and content of the prior art and]...[a]scertaining the differences between the claimed invention and the prior art.”

M.P.E.P. § 2141(II). “Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III). Here, no *prima facie* case of obviousness has been established, for at least the reason that the Office Action has failed to properly determine the scope and content of the prior art, and has failed to ascertain the differences between the prior art and the claimed combinations.

Claim 1 recites a combination including “line fitting means fitting lines using a changeable threshold adapted to . . . noises included in the group of distance data points” (emphasis added). Kanade and Leger, taken alone or in combination, fail to disclose or suggest these elements of claim 1.

Kanade teaches taking a group of points from a three-dimension data. The group of data is assumed to be nearly two-dimension data and fitted to a two-dimensional staircase model 94. Kanade paragraphs [0082]-[0084]. However, when fitting the two-dimension data into model shape 94, Kanade does not teach or suggest a “changeable threshold” is used, nor does Kanade teach or suggest a “changeable threshold adapted to . . . noises included in the group of distance data points,” as recited in claim 1.

Leger fails to cure the deficiencies of Kanade. The Office Action asserts that “Leger teaches: a planar region growing means for extracting a plurality of lines estimated to be in one plane from a group of lines extracted by the line fitting means to calculate a plane from the plurality of lines (fig. 1, 24 see also col. 3 lines 43-46).”

Office Action at pages 3. Even assuming the Office Action's characterization of Leger is correct, which Applicant does not concede, Leger still fails to disclose or suggest "line fitting means fitting lines using a changeable threshold adapted to . . . noises included in the group of distance data points," as recited in claim 1 (emphasis added).

In view of the above deficiencies, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and claim 1. Accordingly, no reason has been clearly articulated as to why claim 1 would have been obvious to one of ordinary skill in the art in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for claim 1, and claim 1 is allowable.

Claims 2-4 and 6-11 are also allowable at least due to their dependence from claim 1.

Independent claims 12 and 19, although of different scope, recite elements similar to those of claim 1. For reasons similar to those discussed above with respect to claim 1, independent claims 12 and 19 are allowable. Claims 13-18 are also allowable due to their dependence from claim 12.

Rejection of claim 5 under 35 U.S.C. § 103(a)

Applicant respectfully traverses the rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Kanade in view of Leger and Mitaka.

Claim 5 depends from and includes each and every element of claim 1. As discussed above, Kanade and Leger, taken alone or in combination, do not disclose or suggest "line fitting means fitting lines using a changeable threshold adapted to . . .

noises included in the group of distance data points,” as recited in claim 1 and included in claim 5 (emphasis added).

Mitaka fails to cure the deficiencies of Kanade and Leger. The Office Action asserts that “Mitaka teaches: The apparatus, wherein the line fitting means segments the distance data point group when the standard deviation of the distance data point group from which the first line has been determined is larger than a predetermined threshold (fig 2 see also col. 14 lines 10-20).” Office Action at page 10. Even assuming the Office Action’s characterization of Mitaka is correct, which Applicant does not concede, Mitaka still fails to disclose or suggest “line fitting means fitting lines using a changeable threshold adapted to . . . noises included in the group of distance data points,” as recited in claim 1 and included in claim 5 (emphasis added).

In view of the above deficiencies, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and claim 5. Accordingly, no reason has been clearly articulated as to why claim 5 would have been obvious to one of ordinary skill in the art in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for claim 5, and claim 5 is allowable.

Rejection of claims 20 and 21 under 35 U.S.C. § 103(a)

Applicant respectfully traverses the rejection of claims 20 and 21 under 35 U.S.C. § 103(a) as being unpatentable over Kanade in view of Leger and Lewis.

Claims 20 and 21 depend from and include each and every element of independent claim 19. As discussed above, Kanade and Leger, taken alone or in combination, do not disclose or suggest “line fitting means fitting lines using a

changeable threshold adapted to . . . noises included in the group of distance data points,” as recited in claim 19 and included in claims 20 and 21 (emphasis added).

Lewis fails to cure the deficiencies of Kanade and Leger. The Office Action asserts that “Lewis teaches: The apparatus, further comprising a texture imparting means for imparting a texture to an object (fig. 10, 49 see also [0066]) . . . [and] wherein the texture imparting means projects a texture to the object when acquiring the three-dimensional distance data (fig. 10, 47 see also [0066]).” Office Action at page 11. Even assuming the Office Action’s characterization of Lewis is correct, which Applicant does not concede, Lewis still fails to disclose or suggest “line fitting means fitting lines using a changeable threshold adapted to . . . noises included in the group of distance data points,” as recited in claim 19 and included in claims 20 and 21 (emphasis added).

In view of the above deficiencies, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and claims 20 and 21. Accordingly, no reason has been clearly articulated as to why claims 20 and 21 would have been obvious to one of ordinary skill in the art in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for claims 20 and 21, and claims 20 and 21 are allowable.

In view of the foregoing remarks, Applicant respectfully requests the reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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